DOCUMENT RESUME

ED 341 249 FL 020 005

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TITLE Instruction or Interaction? A Study of the Acquisition of Modals by Beginning Non-Native Speakers.
PUB DATE 91
NOTE 11p.; In: PENN Working Papers, Volume 7, Number 2/Fall 1991; see FL 020 001. p83-92.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Comparative Analysis; *English (Second Language; *Grammar; *Language Acquisition; Language Research; *Language Skills; *Oral Language; *Second Language Learning; Teaching Methods; Verbs
IDENTIFIERS *Modals (Verbs)

ABSTRACT

The question addressed in this paper is whether explicit instruction makes any difference in the acquisition of modals or whether opportunities for interaction are sufficient. Eight non-native speakers (NNSs), aged 17-35 and representing several nationalities, were tested. The language focus was "will," "be going to," and "won't." A covariance analysis was applied 1 year later. Results suggest that minimal instruction (1 hour per week over a 6 week period) from one instructor to four NNSs can make a difference at the elementary level, and that instruction was significant even for more difficult grammar such as modals. This study underscores the difficulties of quasi-experimental research in second language acquisition. It is suggested that future work could investigate the role and effects of consciousness-raising and learnability/teachability on the rate of acquisition and levels of ultimate attainment. Contains 16 references. (LB)

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Instruction or interaction? A study of the acquisition of modals by beginning non-native speakers

Julian D. Linnell

This paper addresses the question of whether explicit instruction makes any difference in the acquisition of modals or whether opportunities for interaction are sufficient. The authors tests eight non-native speakers and applies a covariance analysis a year later, underscoring the difficulties of quasi-experimental research in second language acquisition.

Introduction

Controversy over formal versus naturalistic contexts for second language acquisition (SLA) has almost come full circle. Formal instruction was essential in the audio-lingual classroom of the 1950s/60s. According to theories based on behaviorism (discussed in Richards and Rogers, 1986), input consists of rigorous stimulus response drills and pattern practice that are meant to produce "good" language habits. Instruction, not interaction, was the modus operandi.

However, empirical research in Europe, as Long (1988) notes, shows that instruction is unimportant with regard to the route of SLA. Felix's (1981) study of 34 German High School students over 8 months concludes that learners are naturally equipped with a universal and common set of principles. Consequently, Felix (1981:109) suggests that "...the possibility of manipulating and controlling students' verbal behavior in the classroom is in fact quite limited." Wode (1981: 220) recognizes differences among contexts (child development, foreign language teaching, naturalistic settings, pidginization/creolization). He subscribes to a nativist perspective believing that human brains are so wired that input triggers adjustments in these structural categories.

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Nativist theory was also supported by grammatical morpheme studies in the USA. Dulay and Burt's (1980) acquisition orders appear to confirm "creative construction." In first language acquisition (Brown, 1973), mental processes were considered to be more important than parental input. Krashen (1982:12) used such studies to build his Monitor Theory and in so doing he stripped instruction to the bone (Long, 1983). He regards instruction as effective for "easy" grammatical rules (e.g., plural -s) in the early stages of acquisition. Learning (conscious/formal instruction) only appeared on discrete-point tests, where form was the focus and when adequate time was available. Children did not learn because they had not yet reached cognitive maturity. Long (1983:379) points out that the morpheme studies that Krashen relies on "were originally motivated by a search for universals in the sequence of SLA, not for the effect of instruction."

In contrast, subsequent work has demonstrated the importance of instruction. Pica's study of 18 Spanish speaking learners of ESL in instructed/uninstructed/mixed contexts (1985) showed that instruction had a selective impact. It accelerated acquisition of linguistically simpler ("easier") items, for example plural -s, and retarded the attainment of target-like use for more complex items like the article a. She concluded that instruction affected non-native speakers (NNSs) at all levels of performance as instructed NNSs tended to over-apply progressive *-ing* and plural *-s*, whereas uninstructed NNS's frequently omitted grammatical morphemes. Lightbown (1983) found that, over time, overuse by instructed Francophone children (aged 11-17) wore off while the benefits remained. She called this the "delayed" frequency effect.

Doughty's empirical study on relative clauses (1988) reinforced the role of the instructor. When taught more "difficult" relative clauses (prepositional object and object), students unexpectedly picked up an "easier" one as well (subject). This contradicted traditional approaches to grammar which said that simpler items should be taught before the more complex in the order the instructor presents them.

Long (1983, 1988) calls for a redefinition of language learning and reasserts the importance of the role of instruction: "First, formal instruction has positive effects on SLA processes, on the rate at which learners acquire the language, and on their ultimate level of attainment" (1988:135). However, no longitudinal studies exist (perhaps for practical reasons) to verify his claim for ultimate achievement. Careful empirical enquiry has led to a reassertion of formal instruction, not in the teacher-dominated classrooms of audio-lingualism, but in teacher-learner partnerships that provide more opportunities for interaction.

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The Study

Background

The question of this study is the following : Does explicit instruction make any difference in the acquisition of modals for elementary level students? Most studies have concentrated on instructed, naturalistic or mixed learners with regard to grammatical morphemes. Most have either focused on all levels of proficiency or have restricted their investigation to intermediate/advanced subjects. A modified version of Long's (1983:375) summary of instruction/exposure studies is recorded below:

Table 1: Studies on the Relationship between Instruction, Exposure and Second Language Acquisition

Study	SLA-Type	Proficiency		
Instruction helps:				
Carroll (1967)	FLL & SLA	B	I	A
Chihara, et al (1978)	EFL (Japan)	B	I	A
Briere (1978)	SPSL (Mexico)	B	*	
Krashen et al (1976)	ESL (USA)		I	A
Instruction does not help:				
Mason (1971)	ESL (USA)		I	A
Fathman (1975)	ESL (USA)	B	I	A
Upshur (1968)	ESL (USA)		I	A

Notes: B=Beginner I= Intermediate A=Advanced * = Children

Almost all the studies (except for one in Japan and one in Mexico) were conducted in the USA and the predominant message was that instruction helps. It is assumed that none of the above studies contrasted interaction (without exposure) with instruction. However, it is the purpose of this study to do so and to provide an equivalent time period for interaction. If the nativist theory is correct, opportunities for

interaction with input from peers may be sufficient to trigger innate categories and promote acquisition.

Subjects

Eight NNSs, aged 17-35, participated in the study. They were taking a beginning course in speaking and listening at the University of Pennsylvania's English Language Program. There were seven males and one female representing several nationalities (Japan, USSR , Turkey, Taiwan, Brazil, and France). I divided them into two groups of four (instructed and uninstructed). This was not a random procedure as I attempted to balance both groups so that one would not be more proficient than the other.

The six-week study consisted of two half-hour sessions per week. Each student was enrolled in 20 hours of English instruction per week. Pre-tests and post-tests were given in weeks 1 and 6. In the pre-test, each group was given a problem. They were told that their aunt had recently died and had left $5,000,000 to them individually. Each group had 10 minutes to discuss their plans for using the money in the future. They had to decide how they would use or not use the money. After 10 minutes of discussion, the students were given 15 minutes to write up their decisions.

In the post-test, each group discussed their plans for after the course. They were asked what plans they had and were encouraged to talk about plans that were definite, uncertain and very unlikely or impossible. They were given 25 minutes for this.

Table 2 : Schedule for Modal Acquisition Study:

	INSTRUCTED (A)	UNINSTRUCTED (B)
Week 1:	Pre-test: Plans for/against uses of $5m inheritance	Pre-test: Plans
Week 2:	Going to: Vacations; Going to: Explanation Handout	Photo stories Pairs/individuals Information Gap
Week 3:	Going to : Activity Demographic Survey (DS)	Describing daily activities (DS)
Week 4:	Will / Won't: Explanation Will/Won't: Exercise (DS)	Jigsaw words/guessing (DS)

Week 5:	Will / Won't: Activity	Talking about familiar places
	Will / Won't: Picture	Information Gap of town plans
	(DS)	(DS)
Week 6:	Will / Won't:	Game: Q/A
	Predictions from cartoons	
	(DS)	(DS)
	Post-test: Plans after ELP	Post-test: plan
	definite/uncertain/impossible	

Each of the 12 sessions were taped and most were transcribed. The demographic survey attempted to identify non-classroom sources of input that, in the event of the uninstructed group scoring higher on the post-test, could help explain such a result. A sample survey is included in the appendix. I felt these surveys were a sensible precaution, although the accuracy and consistency of responses appeared extremely subjective. A much more rigorous system would be required for a quantitative analysis of this data.

Scoring System

Pica (1988) has criticized Suppliance in Obligatory Contexts (SOC) and Target-Like Utterances (TLU) as inadequate categories for morpheme data analysis. SOC, as used in Dulay and Burt (1974) and Brown (1973), ignores oversuppliance in unrequired contexts and credits non-target like regularization. TLU, as in Lightbrown (1980), overlooks the total number of contexts where morphemes could occur and therefore fails to accurately demonstrate a learner's suppliance and control. In light of these shortcomings, Pica designed a simple schema:

a. omission
b. oversuppliance
c. misformation (syntactic)
d. incorrect form (semantic)
e. total required contexts (TRC)
f. correct suppliance (CS)

TRC = a+c+d+f
%correct =f/e

A one-point system was adopted for every item (a-f).

Results

Analysis of Covariance (ANCOVA)

Analysis of covariance (ANCOVA) was used to calculate pre-test/post-test differences between the instructed (A) and uninstructed (B) groups. ANCOVA adjusts post-test mean scores for each group to compensate for differences on pre-tests. This was necessary because pre-test mean scores were considerably different between (A) and (B). According to Borg (1987:146), "the amount of adjustment to post-test means is determined by the differences between groups on the pre-test and the degree of relationship between the pre-test (covariate) and the pst-test (dependent variable)."

At $p<0.05$, post-test (A) was significantly different than pre-test (A) 0.042. The probability that pre-test and post-test differences were due to chance was 0.04. Pre-test/post-test differences for (B) were most likely due to chance .

Table 3: Results of Pre-Tests and Post-Tests

% of correct modals (will, be going to, won't)[1]

	Pre-Test	Post-Test
Group A		
Student # 1	0	0
Student #2	58.33	70
Student #3	25	50
Student #4	0	0
Group B		
Student #5	0	66
Student #6	0	10
Student #7	0	0
Student #8	18	0

Note: Student#8 from Group B had returned to Brazil on the post-test. A dummy 0 was inserted for purposes of calculation on the MYSTAT program. I realize that this might invalidate the results.

Discussion

Although ANCOVA produced a result indicating (A) > (B), a number of qualifications must be made both about the quasi-experimental design and the statistics used. In comparison with instruction/exposure studies (e.g. Fathman, 1975; Mason, 1971), this study had a small sample size (only 8 subjects) and was of short duration (6 weeks). In Long's 1983 summary, other studies ranged from 7 weeks to 3 years. External variables interfered with the treatment (uninstructed) and post-test. Subject B#1 received extra tutoring outside the class and had asked his tutor explicitly about *will* and *be going to*. If this invalidated his inclusion in the uninstructed group, then his score could be justifiably included in the instructed group's post-test score.

The quasi-experimental and statistical problems referred to in this study mean that these results cannot be transferred to other contexts. Research into the effects of instruction on interlanguage development and second language acquisition is required if our knowledge is to be expanded beyond the confines of small scale empirical case studies. The language focus of this study (*will, be going to, won't*) is also problematic. ESL texts sometimes provide grammatical explanations without reference to what is sociolinguistically appropriate. Given the distinction between sudden resolve and premeditation and the differing uses of *will, be going to*, it is hardly surprising that NNSs face considerable difficulties producing both appropriate and accurate utterances. Modals, in general, are intrinsically difficult from both semantic and syntactic points of view, and it is understandable that little research has been conducted in this area. However, such research is necessary to give ESL teachers and materials developers a more realistic picture of the acquisition processes involved with modals.

Under the conditions of this study, it would appear that minimal instruction (one hour per week over a six week period) from one instructor to four NNS's can make a difference (although not a tremendous one) at the elementary level. Krashen (1982) argued that instruction at this level could be used for "easy" grammar (e.g. plural -s). The evidence here suggests that instruction was significant even for more"difficult" grammar (e.g., modals). Further studies over a longer period of time with more subjects and stricter controls are required to find out if *will, be going to, won't* are acquired more easily than other modals. Longitudinal studies would also have the advantage of providing more accurate information about developmental sequences in the modal acquisition process.

Conclusion

Two subjects from the instructed group were re-tested one year after this study was completed. Each received six hours of individual tutoring over a two week period. Although no statistical claims can be made on the basis of such a small sample (N=2), the results are of interest. Subject (A) received continuous ESL instruction over the course of the year at a pre-academic program for NNSs at the University of Pennsylvania. Subject (B) did not receive continuous instruction but, as a Teaching Assistant in the Russian Department at the University of Pennsylvania, did have opportunities for interaction with native speakers:

Table 4: Changes in the Percentage of Correctly Supplied Modals (1990-1991)

	Pre-Test	Post-Test
Subject A	+17.8%	-1.5%
Subject B	+24.2%	+9.9%

From Table 4 we can see that Subject A improved by +17.8% in the pre-tests over a one year period. His post-test scores, however, remained virtually unchanged. This might indicate that six hours of individual tutoring over two weeks was not sufficient to increase accuracy. Subject B appeared to have made greater gains in the both the pre- and post-tests in comparison to Subject A. However, this may reflect the fact that Subject B had lower accuracy initially and, therefore, was able to make a more noticeable improvement.

This study has demonstrated the difficulties involved in doing quasi-experimental research on language acquisition. Future work could investigate the role and effects of "consciousness-raising" (Sharwood-Smith, 1981) and "learnability and teachability" (Pienemann, 1982 & 1984) on the rate of acquisition and levels of ultimate attainment. Factoring out the precise effects of instruction and interaction both on performance and the process of second language acquisition remains a task that has yet to be completed.

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[1] It was my intention to calculate matched pairs; however, the computer indicated that there was insufficient data.

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